United States Department of Agriculture
Forest Service

Lookout Tower Removal Project

Draft Environmental Assessment

Williams Ranger District, Kaibab National Forest, Coconino County, Arizona

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Draft Environmental Assessment
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Coconino County, Arizona

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Document Disclaimer: Within the USDA Forest Service, there is a national emphasis to further the efficiency of the agency's National Environmental Policy Act (NEPA) process. To meet this objective, the content of this environmental assessment (EA) has been streamlined to only include content found in the legal requirements found at 36 CFR 220.7(b) "An EA must include the following: (1) Need for the proposal. The EA must briefly describe the need for the project. (2) Proposed action and alternative(s). The EA shall briefly describe the proposed action and alternative(s) that meet the need for action… (ii) The EA may document consideration of a no-action alternative through the effects analysis by contrasting the impacts of the proposed action… with the current condition and expected future condition if the proposed action were not implemented… (3) Environmental Impacts of the proposed action and alternative(s)… (4) Agencies and Persons Consulted." All documents used in this analysis are incorporated by reference (40CFR 1502.21). Information and supporting documents used to prepare this EA can be obtained from the Williams Ranger District Office.

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Background

The Kaibab National Forest (NF), Williams Ranger District, is proposing to demolish and properly dispose of and remove all existing structures associated with the Red Hill lookout and Round Mountain lookout towers. The lookout towers consist of fire lookout tower/cabins, a steel water storage tank, one propane cylinder tank, and two separate areas showing remnants of concrete/rock foundations.

The Red Hill lookout tower is an inactive two-story fire lookout tower. This design was constructed for lookout personnel to be able to use the lower story as living corridors' and the upper story for locating fires. The upper story is a steel framed cabin 14 feet square built on an 8 feet high concrete blockhouse. The building was erected in 1958 when it replaced an earlier wooden tower built in the late 1920's. Currently, a radio repeater was added to the Red Hill lookout tower which allowed for critical communications to be added to the network.

The fire lookout tower was used primarily to locate fires on the northern side of the Williams Ranger District. The fire lookout tower has not been staffed or utilized since the early 2000's. This building has been neglected from annual maintenance and is unsafe for occupancy. A nearby active fire lookout tower provides ground sight overlap when locating fires. Lookout towers are normally operated seasonally from May through October. There is a locked gate at the bottom of the access road to the Red Hill lookout tower limiting access to the public.

The Round Mountain lookout tower is a 35 feet high steel fire lookout tower and has 7 feet square steel cabin. The tower was erected in 1960, after being moved from the Coconino NF. The Round Mountain lookout tower is an inactive lookout tower which has been used intermittently when Turkey Butte lookout on the Coconino NF is not staffed or when there is any active wildland fire nearby.

Project Location

For this project, the Williams Ranger District has two project locations.

Red Hill lookout tower which is located east of Williams, Arizona within all portions of Township 24N Range 4E Section 17.

Round Mountain lookout tower which is located southeast of Williams, Arizona within all portions of Township 20N Range 3E Section 33.

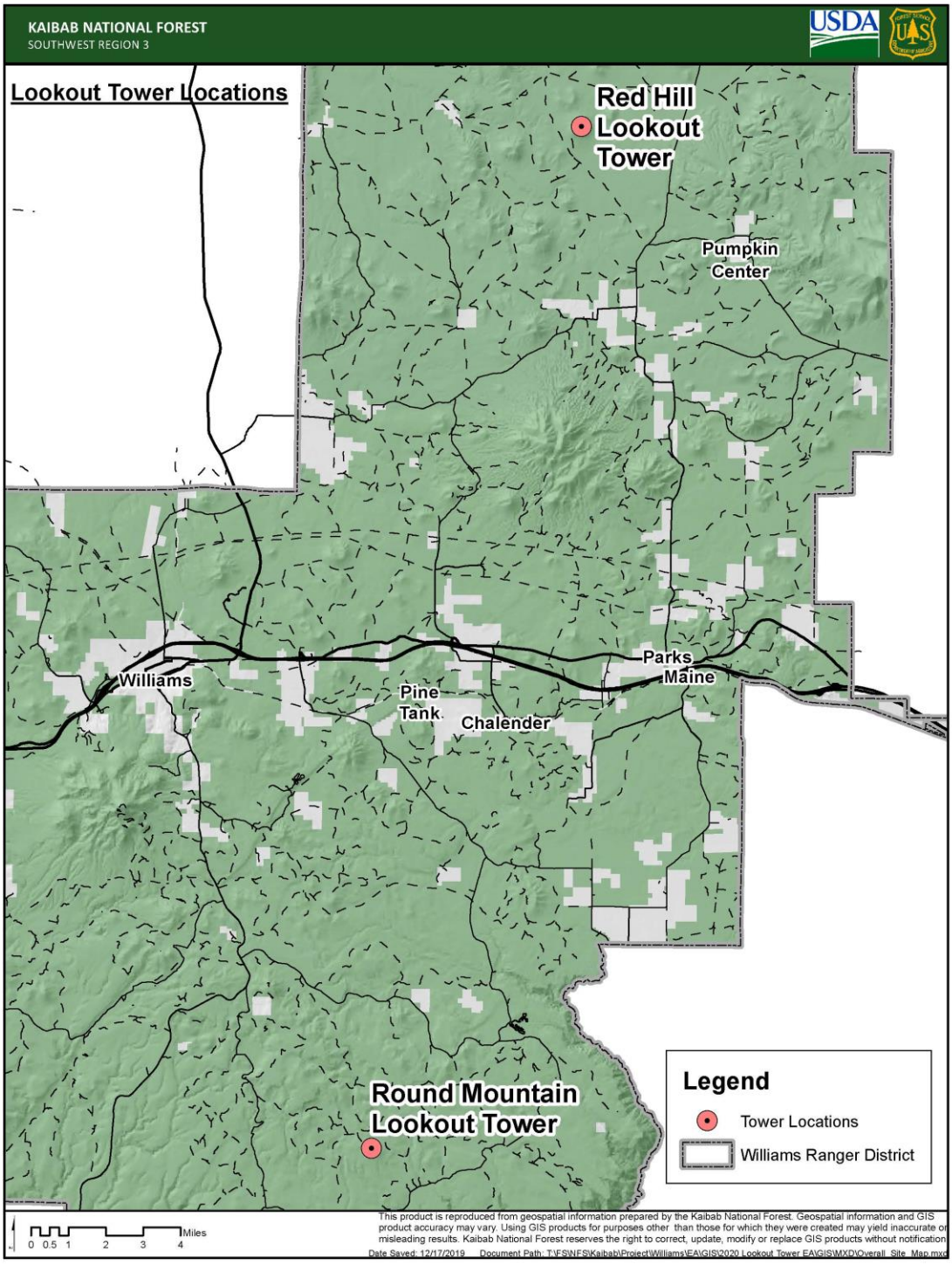

Figure 1: Vicinity map for both the Red Hill lookout tower and the Round Mountain lookout tower

Forest Plan Consistency

This Environmental Assessment is based on background information about the lookout towers. The desired conditions for resources related to the lookout tower removal were derived from the Kaibab NF Land and Resource Management Plan (Forest Plan) (USDA-2014). You can find the Forest Plan, and related documents at https://www.fs.usda.gov/detail/kaibab/landmanagement/planning/?cid=stelprdb5106605.

The Forest Plan provides guidance for the management of multiple-use activities that occur within the Kaibab NF. This analysis is consistent with the Kaibab NF Forest Plan for the following affected resources: Botany and Invasive Species, Cultural Resources, Fire and Fuels, Soils and Watershed, and Wildlife.

Desired conditions and guidelines from the Forest Plan for the above mentioned resources related to this analysis are:

Botany (Pages 51-52):

Desired Conditions:

- Location and conditions of rare and narrow endemic species are known.
- Threatened, endangered, and sensitive species have quality habitat, stable or increasing populations, and are at low risk for extirpation.

Guidelines:

- Project Design should incorporate measures to protect and provide for rare and narrow endemic species where they are likely to occur.
- Project activities and special uses should be designed and implemented to maintain refugia and critical life cycle needs of Forest Service Sensitive Species.

Nonnative Invasive Species (Page 53):

Desired Conditions:

- Invasive species are contained and/or controlled so that they do not disrupt the structure or function of ecosystems or impact native wildlife.

Guidelines:

- All ground-disturbing projects should assess the risk of noxious weed invasion and incorporate measures to minimize the potential for the spread of noxious and invasive species. New populations should be detected early, monitored, and treated as soon as possible.

Cultural Resources (Page 59):

Desired Conditions:

- All historic properties are evaluated for their eligibility to the National Register and properties that are appropriate are listed to the National Register of Historic Places.

- Cultural resources, including known traditional cultural properties, are preserved, protected, or restored.

Fires and Fuels (Page 73):

Desired Conditions:

- Wildfires are detected early.

Soils and Watershed (Page 44):

Desired Conditions:

- Soils are free from anthropogenic contaminants that could alter ecosystem integrity or affect public health.

Guidelines:

- In disturbed areas, erosion control measures should be implemented to improve soil conditions.
- Projects should incorporate the national best management practices for water quality management and include design features to protect and improve watershed conditions.

Wildlife (Page 51):

Desired Conditions:

- Threatened, endangered, and sensitive species have quality habitat, stable or increasing populations, and are at low risk for extirpation.

Guidelines:

- Project activities and special uses occurring within federally listed species habitat should integrate habitat management objectives and species protection measures from approved recovery plans.

The Tower Removal Project would meet all of the above Forest Plan guidance through implementation of the mitigation measures listed in the *Proposed Action* section of the EA.

Purpose and Need

The purpose of the Lookout Tower Removal Project is to completely remove two structures and the associated infrastructure. These two towers have not been used or maintained recently, causing the buildings to degrade and rodents to inhabit the buildings. Both structures pose a safety risk due to the presence of rodent feces which could harbor hantavirus and lack of structural integrity. This project is needed due to health and safety for both the public and Forest personnel that may use the facilities. By removing these structures, the Kaibab NF can decrease relative risk associated with the minimally used towers.

To ensure the Kaibab NF is meeting desired conditions for early detection of wildfires, the Kaibab NF would replace these towers with updated infrastructure. These towers have been identified for the network of fire detection cameras due to their location on the landscape and ease

to access. The fire detection camera network would incorporate many current locations of existing fire detection towers to provide a broad network for early and accurate fire detection.

Proposed Action and Alternatives

Mitigation measures associated with these actions can be found within the proposed action below. Documents used for this analysis are incorporated by reference and can be acquired at the Williams Ranger District Office or online at https://www.fs.usda.gov/project/?project=57388. Due to the public and employee safety concern of these structures, the proposed action was the only alternative considered in detail during this analysis. Per 36 CFR 220.7(a)(i), the no action alternative does not need to be considered during analysis.

Proposed Action

Kaibab NF proposes to have all associated structures decommissioned and/or removed from the Red Hill and Round Mountain lookout tower locations. Upon removal of the lookout tower, the excavated areas would be backfilled, compacted, and scarified to encourage regrowth.

Red Hill Lookout Tower:

The Red Hill lookout tower encompasses an estimate of 400 square yards. The total acreage including the access road, Forest Road (FR) 88, estimates to a total of 4 acres. For Red Hill, the following structures would be removed:

- Two-story lookout tower
- Galvanized steel water storage tank
- Propane gas cylinder tank

A propane gas cylinder tank and galvanized steel storage tank would be hauled off the site and properly disposed. The backhoe on site would most likely be utilized to load and lift into trucks for removal and for any earthmoving type of activities.

Two types of buried utilities would be left in place except at areas where the pipe extends above ground where they connect to the propane tank and/or water storage tank. These exposed pipes would be dug down about 12 inches to cut, cap the ends, and would be re-buried. Abandoning the lines would minimize resource damage by not trenching and removing the full length of buried lines.

The current road condition of FR 88 which routes directly to the lookout site has not been maintained. There is not a recent assessment and the road would most likely need road maintenance work within the existing roadway, prior to any tower demolition. The amount of road construction maintenance would be applied to at least 5 miles of road for FR 88. The standard road width on this section of road is 12 ft. wide and a 1 ft. wide drainage ditch on one side of the road. The road maintenance work would be completed in the existing roadway. Road construction equipment, such as a dozer/blader, may be necessary to move eroded material from the adjacent road drainage ditch and edges to be brought back onto the roadway. There would be no new road alignment necessary and only maintenance work would occur.

Round Mountain Lookout Tower:

The Round Mountain lookout tower would have all the associated structures decommissioned and/or removed from the site and the lookout area would be returned to natural grade as best as possible. Upon removal of the lookout tower, the excavated area would be backfilled, compacted, and scarified to encourage regrowth. The immediate lookout area encompasses an estimate of 325 square yards. The total acreage including the access road 138A and the lookout area estimates to be a total of 2.5 acres.

The following structures would be removed, hauled, and properly disposed:

- 35 ft. high elevated, bolted steel structure with a steel cabin

There would be excavating equipment such as a medium sized backhoe to excavate the concrete foundations for the tower. The backhoe would most likely be used to complete the demolition by loading the construction debris into dump trucks or into truck beds.

The ¾ mile of FR 138A would receive maintenance work to provide a suitable road base for the construction equipment needed to dismantle the steel lookout structure. The steel structure is bolted at the ends of each beam. The contractor would submit their demolition plans for the structure prior to demolition and would be required to disassemble the structure safely and comply with all mitigation measures provided. There may be qualified personnel managed by the contractor to disassemble the structure using fall protection. The use of a medium sized excavator would also be suitable to lower the steel structure for a complete disassembly on the ground.

There has not been recent road assessment and would most likely need road maintenance work within the existing roadway, prior to any scheduled tower demolition. The amount of road construction maintenance would be applied to at least 4 miles of the road. The standard road width on this section of road is 12 ft. wide with a 1 ft. die drainage ditch on each side of the road. Road construction equipment such as dozer/blader may be necessary to move eroded material from the adjacent road drainage ditch and edges to be brought back onto the roadway. There would be no new road realignment necessary and only maintenance work.

With the removal of the existing facilities at these locations, future improvements would be needed at the sites for communications and fire detection. A new communications unit at Red Hill lookout tower that is approximately 8 feet by 8 feet with a communications tower would be installed after the removal is complete. The new communications tower, approximately 20-30 feet tall, would incorporate an antenna mast for the repeater station and a fire detection camera. At Round Mountain lookout, a new tower for a fire detection camera would be erected. This tower would have a height of 40-50 feet and have guide wires for stability.

Mitigation Measures By Resource:

Botany and Invasive Species:

- Botany surveys would be conducted in 25 foot buffers around the project areas.
- Rare plant populations would be flagged for avoidance.
- Any vehicles and equipment must be cleaned before and after use on the project site.
- Any road materials would be from weed-free sources maintained by the Kaibab NF.
- The contractor would notify the Forest Service prior to moving each piece of equipment into the project area.

- The contractor would use cleaning methods necessary to ensure equipment is free of all attached mud, dirt, and plant parts to be conducted outside the boundaries of National Forest System lands.
- If invasive species are present at a project site, cleaning may also be required before moving between locations within the same project.

Table 1: Best Management Practices (BMPs) for Red Hill and Round Mountain lookout tower removal

General Integrated Weed Management Practices for All Site-disturbing Projects and Maintenance Programs	
Objective	**Best Known Practice**
2. Avoid or remove sources of weed seed and propagules to prevent new weed infestations and the spread of existing weeds.	2.1 – Before ground-disturbing activities begin, **inventory** and **prioritize treatment** of invasive weeds in project operating areas and along access routes, or within reasonably expected potential invasion vicinity. Do a risk assessment accordingly; control weeds as necessary. **[Coordinate with District Weeds Specialist.]** 2.2 – After completing ―Practice 2.1 above, reduce risk of spreading and creating weed infestations. Plan operating areas and access routes to **avoid heavy infestation areas**, plan closure of access routes at finish of project, and/or **begin project operations in uninfested areas before operating in weed-infested areas.** Locate and **use weed-free project staging areas**. Avoid or minimize all types of travel through weed-infested areas, or restrict to those periods when spread of seed or propagules are least likely. **[On-Forest] Equipment Wash Station [if needed]** – …must have a filter system, for example at least 6 inches of large cinder or gravel spread over an area 10' x 30′. Filter cloth may be used for temporary stations. The area will be a perched drainage to allow excess moisture to drain after being filtered and must be at least 200 yards from a natural drainage to avoid contamination. All wash station locations must be monitored annually and all weed materials removed as soon as possible. 2.4 – If operating in areas infested with weeds, **clean all equipment before leaving the project site**. To minimize time spent cleaning equipment, time all work in infested areas last and concurrently, **designate a contaminated parking lot** where project vehicles working in the infested area may be parked for the duration of the project. This area should be monitored in followup mitigation and should be near a clean vehicle/equipment lot. Identify sites where equipment and vehicles can be cleaned before leaving the site at the end of the project. Seeds and plant parts need to be collected when practical and incinerated.
3. Prevent the introduction and spread of weeds caused by moving infested sand, gravel, borrow, and fill material in Forest Service, contractor and cooperator operations.	3.1, 3.2, 3.3 – [Any material imported to the sites for road work should be **from sources approved by the District Weeds Specialist** based on annual inspections and weed treatment schedules]
5. Where project disturbance creates bare ground, establish vegetation to minimize favorable conditions for weeds.	5.2 – Revegetation may include topsoil replacement, native seedbank promotion, planting, seeding, fertilization, and/or weed seed-free mulching as necessary. Use local native material where appropriate and feasible (or specifically identify why not used). Always use certified **weed-free and weed seed-free hay or straw**. Always use certified materials in areas closed by administrative order. **Where practical, stockpile weed seed-free topsoil from the**

	project area and replace it on disturbed areas (e.g. road embankments, staging areas, wash stations, or landings).
ENGINEERING/ ROADS/ MINERALS	
Objective	**Best Known Practice**
ERM-1. Incorporate weed prevention into project layout, design, alternative evaluation, and decisions.	1.3 – For new and reconstruction of roads conducted as part of public works (construction) contracts and service contracts include **contract language for equipment cleaning** such as is in WO-C/CT 6.36.
ERM-2. Prevent conditions favoring weed establishment, minimize bare soil conditions and promote vegetation on bare ground.	2.2 – Schedule and coordinate all earth-moving or soil-disturbing activities (such as pulling of invasive weed-infested roadsides or ditches) **in consultation with the local weed specialist. Do not blade or pull roadsides and ditches that are infested with weeds** unless doing so is required for public safety or protection of the roadway. If the ditch must be pulled**, ensure the weeds remain onsite. Blade from least infested to most infested areas.** When it is necessary to blade weed-infested roadsides or ditches, schedule the activity when seeds or propagules are least likely to be viable and spread. Minimize soil surface disturbance and contain bladed material on the infested site.
ERM-3. Minimize roadside sources of weed seed that could be transported to other areas.	3.1 – **Retain bonds until reclamation requirements are completed, including weed treatments**, based on inspection and documentation. Require followup monitoring based on seed viability in soil of known and potential weed species. 3.2 – Periodically inspect system roads and rights-of-way for invasion of weeds**. Train road maintenance staff [and/or contractors] to recognize weeds and report locations** to the local weed specialist. Inventory weed infestations and schedule them for treatment. 3.3 – Avoid acquiring water for dust abatement from weed-infested areas.

Cultural Resources:

- If road work is to occur outside the road prism, archaeologist would be notified prior to the work and would mark any cultural resources for avoidance as needed.

Fire and Fuels:

- The communications repeater would need to be supplemented with a portable repeater until the permanent repeater is replaced at the Red Hill lookout tower location.
- There may be a need to delay the removal of Red Hill lookout tower until after the fire season to ensure critical communications are in place during the season.

Soils and Watershed:

Table 2: BMPs Related to Soils and Watersheds for Red Hill and Round Mountain lookout tower removal

BMP #	Mitigation	Purpose
1	Do not operate equipment when ground conditions are such that soil rutting, compaction or puddling can occur.	To maintain long-term site productivity.

BMP #	Mitigation	Purpose
2	Roads should not be bladed when the road surface is too dry. If the road surface is too dry, water should be applied, or road blading should be scheduled when adequate moisture is present to complete road reshaping.	To minimize soil particle detachment and fugitive dust, and to ensure the longevity of road surface material.
3	Ensure that existing drainage structures on roads (rolling dips, culverts, rock crossings, etc.) are functioning correctly.	To prevent erosion and sedimentation of stream courses and water bodies.
4	Lead out ditches should be maintained in a manner that does not allow sediment-laden runoff to enter stream courses and/or drainages.	To prevent erosion and sedimentation of stream courses and water bodies.

- Erosion control measures to be included in the contract stating that work to minimize sediment laden water from entering any body of water. Check dams, sediment fences, or other means of erosion control would be the responsibility of the contractor for installation. This would minimize impacts to bodies of water including washes, creeks, streams, lakes, rivers, etc.
- Stockpiles and construction debris would not be located within 100 feet of any body of water, or drainage that can quickly be saturated with water during monsoon season.
- Erosion control devices (i.e. culverts) may be removed by contractor upon completion of the project with specialist approval.

Common to Wildlife and Vegetation Management:

- If any tree removal is needed, both the wildlife biologist and the vegetation management personnel would need to be notified prior to removal.

Additional Mitigation Measures:

- The contractor would confine operations to within the project area boundary and prevent depositing rocks, excavated materials, stumps, and/or other debris outside of these limits.
- Pollutants such as fuels, lubricants, bitumen's, raw sewage, and other harmful materials would not be discharged into or near rivers, streams, and impoundments or into natural or manmade channels.
- *Prevention of oil spills:* If the contractor maintains storage facilities for oil or oil products in project area, appropriate preventive measures would be taken to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual states.

Environmental Effects

This section summarizes the potential effects of the proposed action and alternatives for each affected resource. Each of the affected resource areas listed below did not find effects of cumulative actions and therefore, they are not analyzed further in this analysis.

Botany and Invasive Species

Existing Condition

No botany surveys by Forest personnel or partners have taken place in the footprint of the proposed actions at the Round Mountain or Red Hill lookout towers and their access roads. Fickeisen plains cactus (*Pediocactus peeblesianus var. fickeiseniae*) is the only federally listed (threatened or endangered) plant species known to occur on the Kaibab NF and is considered highly unlikely to occur in these areas based on its range and habitat requirements. Other rare plant species (Forest Service- sensitive, restricted range, and/or narrowly endemic plant species) considered likely to occur in these areas include Rusby's milkvetch (*Astragalus rusbyi*) and Mt. Dellenbaugh sandwort (*Eremogone aberrans*) at the Red Hill site and creeping milkvetch (*Astragalus troglodytus*), Macdougal's bluebells (*Mertensia macdougalii*), Flagstaff beardtongue (*Penstemon nudiflorus*) and Oak Creek Triteleia (*Triteleia lemmoniae*) at the Round Mountain site. All of these species are well distributed within their potential habitats on the Kaibab NF based on available survey data.

Noxious weeds of concern that may occur at these sites include cheatgrass and Japanese brome (*Bromus tectorum and B. japonicus*), bull thistle (*Cirsium vulgare*), Dalmatian toadflax (*Linaria dalmatica*), knapweeds (*Centaurea* species), and scotch thistle (*Onopordum acanthium*).

Effects of the Proposed Action

Potential effects of the proposed action include loss of rare plant individuals and/or populations through direct ground disturbance, impacts to habitat quality for these species, spread of weed species into disturbed soil, and transport of weed seeds or propagules to or from the sites on vehicles and equipment and in imported road materials.

Ground disturbance associated with demolition and road improvements would be almost entirely limited to previously disturbed areas (the administrative sites and existing roadways); however, to the extent possible before implementation, botany surveys would be conducted in 25-foot buffers around the footprint of these activities. This would allow rare plant populations to be flagged for avoidance (for example, in the event that road materials must be spread off-road or heavy equipment needs off-road space to turn around).

Prior to implementation, noxious weeds would be surveyed for and treated. Erosion control measures (Table 2) would reduce new soil disturbance, helping to maintain resilient habitat for native plant species and reduce the potential for invasion by weeds.

Requirements to clean vehicles and equipment at off-Forest locations before and/or after use on the project sites are written into the proposed action to reduce the spread of weed seeds or propagules on the Forest. The weed treatment and monitoring program on the District would assign this project appropriate priority based on known weed species present and guidelines in the *Final Environmental Impact Statement (FEIS) for Integrated Treatment of Noxious or Invasive Weeds (Coconino, Kaibab, and Prescott National Forests) (USDA 2005)*. The most relevant weed management BMPs for this project (from Appendix B of the aforementioned FEIS) are specified in Table 1; other BMPs from this document may apply.

Conclusions

The proposed action would comply with desired conditions and guidelines for management of all native plant species and noxious weeds as described in the Forest Plan. The potential impacts to rare plant species and noxious weeds by this project are greatly reduced by its limited footprint and the resource protection measures to be put in place. The project is unlikely to contribute to a downward trend in viability of any plant species or its habitat and geographic range on the Kaibab NF or to trend these species towards listing under the Endangered Species Act (ESA). It is also unlikely to encourage the establishment or spread of noxious weeds on the Kaibab NF.

Cultural Resources

Existing Condition

The Round Mountain and the Red Hill lookout towers were previously declared not eligible for the National Register of Historic Places during a thematic nomination of lookout towers across the Southwest Region of the United States Forest Service published in September 1989 (USDA 1989).

Due to lack of maintenance, the Round Mountain lookout tower is in a degraded condition and is a 35 foot high steel tower with 7 feet square steel cab. It was originally built on the Coconino National Forest and relocated to its current location on the Kaibab NF in 1960. The tower is an Aeromotor MC-39 type. In the 1989 nomination, the tower was not recommended for inclusion since it was removed from another location, thus it lacked integrity in location and setting. Kaibab NF archaeologists agree that this should still not be considered eligible for the National Register of Historic Places.

Due to lack of maintenance, the Red Hill lookout tower is in a degraded conditions and is a USDA Standard Plan CL-100 to CL-106 series type. It has a steel cab 14 feet square set on an 8 feet high concrete blockhouse base. It was erected in 1958, replacing an earlier wooden tower built in the 1920s. During the 1989 nomination, the tower was not considered eligible for the National Register because it does not represent an exceptional type of style. This is still the case and Kaibab NF archaeologists agree that the Red Hill lookout should still not be considered eligible for the National Register of Historic Places.

Effects of the Proposed Action on Cultural Resources

While the towers would be completely removed, they have been fully documented and photographed and their histories published in the *Lookout in the Southwestern Region* (USDA 1989). Because the two lookout towers are not eligible for the National Register of Historic Places, there would be no effect on any properties that are on, eligible or not evaluated for the National Register of Historic Places. If road work is to take place outside of the prism of the disturbed road bed, archaeologists would mark any cultural resources for avoidance as needed. This project is currently under consultation with the State Historic Preservation Office (Weintraub R2020030700016).

Conclusions

The proposed action complies with the National Historic Preservation Act of 1966, as amended as well as the Forest Plan. While the proposed action would completely remove the lookout towers, both towers are still not eligible for the National Register of Historic Places, and thus the project

would have no effect on any properties that are on, eligible, or not evaluated for the National Register of Historic Places.

Fire and Fuels

The removal of Red Hill and Round Mountain lookout towers does not affect the fire detection operations on the Williams Ranger District or surrounding lands. Currently, these areas are served by other staffed lookouts during the fire season that include Bill Williams, Volunteer, Red Butte, Turkey Butte and Kendrick lookout towers. The currently staffed towers provide adequate coverage of the critical areas that include urban interface and watersheds. Red Hill and Round Mountain lookouts have not been staffed within the last decade and there are no anticipated staffing needs in the future. In place of the lookout towers, a fire detection camera network would incorporate many current locations of existing fire detection towers to provide a broad network for early and accurate fire detection.

Red Hill lookout does have a forest communications repeater collocated within the area north of Sitgreaves Mountain and West of Kendrick Mountain. This communications repeater would need to be supplemented with a portable repeater until the permanent repeater is replaced at that location.

Soils and Watershed

Affected Environment

The Red Hill and Round Mountain lookout towers are located on the Williams Ranger District of the Kaibab NF. Red Hill lookout tower and associated access road (forest road (FR) 88) are located within the Miller Wash Headwaters and Middle Spring Valley Wash subwatersheds. Round Mountain lookout tower and associated access road (FR 138A) are located within the Tule Canyon subwatershed. Inadequately maintained road conditions on FR 88 and 138A currently exist. These conditions contribute to increased erosion, sedimentation, and poor road condition.

Proposed Action

The soil and watershed effects analysis pertaining to the Red Hill and Round Mountain lookout tower demolition considered all potential effects to soil and watershed resources. Future construction of towers for communication and remote fire lookout instrumentation would generally occur at the same locations where Red Hill and Round Mountain lookout towers currently exist. Best Management Practices (BMPs) described in table 1 would mitigate adverse effects to soil and watershed resources.

Short term minor impacts to soil and watershed resources would occur as a result of the proposed action including soil disturbance, erosion, and sedimentation. These impacts would be limited in duration (time needed to address road maintenance, lookout tower demolition, associated removal of utilities, and construction of new towers) and extent (roadway of FR 88 (~4 acres) and 138A (~2.5 acres), and lookout tower areas (~.2 acres). There would be no negative long-term effects anticipated as areas of disturbance would be backfilled, compacted, and scarified to encourage re-growth. Improved road conditions would be anticipated where adequate road maintenance occurs. All past, present, and reasonably foreseeable activities were considered within the cumulative effects analysis. The proposed action would not result in any cumulative effects to soil and watershed resources due to the location of the project areas.

Conclusion
The proposed action would be in compliance with soils and watersheds desired conditions and guidelines for management as described in the Forest Plan for the Kaibab NF. The proposed action would result in minimal short term direct and indirect effects to soil and watershed resources. No cumulative effects are anticipated from past, present, or reasonably foreseeable activities and the proposed action.

Wildlife

The South Zone Kaibab NF Wildlife Biologist reviewed the possible species that could occur in the project areas (See the Biological Assessment in the project record). Site-specific occurrence records are not available for most of these species, but each species' occurrence in its respective habitat is assumed if thorough survey has not provided data to support absence.

Mexican Spotted Owl (MSO): The Round Mountain lookout tower is 2.5 miles north of the nearest MSO Protected Activity Center (PAC), Elk Lee. The PAC was surveyed two times in 2019 with no MSO detected. No habitat alteration is proposed from the project and noise disturbance would be far from (2.5 miles) any known MSO in the area. There would be no effect to the MSO or MSO critical habitat from implementation of the project.

Northern Goshawk: There is a goshawk post-feldging area (PFA) approximately 1/2 mile from the Round Mountain site. It was inactive when surveyed in 2018. One half of a mile provides an adequate buffer from the small amount of time that noise distrubance from the proposed project would cause.

Bald and Golden Eagles: Though overwintering by both eagle species occurs across the project areas, no areas have been designated as important overwintering areas. No roost locations have been identified on either project area and no snags would be removed as a result of project implementation. Implementation would not occur during the winter months and would not disturb eagles if it did. The proposed action would not affect Important Overwintering Areas.

Allen's lappet-browed bat: Under the proposed action implementation activities could potentially disturb Allen's lappet-browed bats if they are roosting in rock crevices near the project area. This habitat has not been observed in the project area so risk of disturbance is minimal and not likely. Foraging bats could temporarily be disturbed by these activities, though these would not occur at night when bats are active.

A list of migratory bird species likely to be in or around the project area was reviewed by the South Zone Kaibab NF Wildlife Biologist. The species that could occur in or around the project area (Northern Goshawk, MSO, Flammulated owl, Lewis's Woodpecker, Olive-sided flycatcher, Cordilleran flycatcher, Purple Martin, Grace's Warbler, and Red-faced Warbler) would not be affected by the project's implementation as no habitat modification or snag removal would occur and the duration of implementation would be short. No bird species would be intentionally taken as a result of this project and no unintentional take would be reasonably attributable to agency action as having a negative effect of any migratory bird population. Acres of habitat are considered impacted in a stable or improving trend as there would be no change in environmental baseline within these species habitats.

Summary of Determination of Effects

The proposed action has no effect on Threatened, Endangered, or Candidate Species, or designated Critical Habitat. The proposed action is not likely to cause a trend toward listing or loss of viability of any Sensitive Species.

Actions proposed in this project are not expected to cause a downward trend in any migratory bird species toward federal listing as threatened or endangered. The project would not result in the take of bald or golden eagles, including disturbance as defined as: 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Public Involvement

Planning for the Lookout Tower Removal Project began in December of 2019. The project was first published on the Forest Service Schedule of Proposed Actions (SOPA) on January 1, 2020. In December 2019, a District interdisciplinary team met to develop the proposed action and identify preliminary issues, concerns and measures to carry forward into the analysis. This project was not scoped initially, rather the intent for this analysis is to combine the scoping and comment period with public review of this Draft EA, in an effort to expedite this project.

The Tribal Relations Liaison for the Kaibab NF stated in an email dated November 26, 2019, the project listing on the SOPA was the primary method used to initiate tribal consultation. No further need for tribal consultation has been identified.

Agencies and Persons Consulted

Informal or formal consultation with the United States Fish and Wildlife Service was not required for this project because the Forest Service Biologist made a No Effect determination for federally-listed species (e.g. MSO, and Bald and golden eagles). Thus, consultation is not necessary.

As stated above, the Kaibab NF conducted tribal consultation and found that there was no further need to consult on this project. Consultation with SHPO is currently in progress.

Interdisciplinary Team

Name	Position/Role
Victoria Payne	Team Lead; NEPA; Writer/Editor
Neil Weintraub	Archaeology
Justin Schofer	Wildlife Biologist
Micah Kiesow	Soil Science and Watershed Conservation
Jesse Duff-Woodruff	Botany and Invasive Species (Weeds)
Mike Lyndon	Tribal Relations Liaison
James Burton	Fire and Fuels
Tina Williams	Engineering
Mark Christiano	GIS
Sue Farley	NEPA Coordinator

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